RELIGION, SCIENCE, AND SOCIETY IN THE MODERN WORLD

ALEXANDER D. LINDSAY

MASTER OF BALLIOL COLLEGE, OXFORD



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LECTURES ON RELIGION IN THE LIGHT OF SCIENCE AND PHILOSOPHY

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RELIGION, SCIENCE, AND SOCIETY IN THE MODERN WORLD

I

RELIGION AND FREEDOM

I HOPE it will not be considered inappropriate in these days, when the heritage of our Western civilization is at stake, if I approach the subject defined in the trust deed of the Terry Foundation from a historical, even from a social or political point of view. We students of philosophy are apt to consider religion and science as abstract somethings existing in their own right. In the empyreal upper sphere in which they are properly at home, they meet in the presence of a third heavenly being called philosophy. It is agreed that the spirit of these superterrestrial beings may descend upon individual human beings. There are saints, prophets, and martyrs, even humble professing Christians, as there are scientists—the great discoverers, Galileo or Newton or Darwin—and their disciples and followers, and a great number of ordinary scientific researchers. So again there is a small band of philosophers, and a larger band of teachers and students of philosophy. Nevertheless we tend often to think of these earthly embodiments of religion, science, and philosophy as being, relatively at least, accidental; as though we could consider the rela-

tions of religion, science, and philosophy almost without considering these and certainly without considering the institutions and human relations in and amid which these activities of the human spirit are carried on.

Recent events are surely teaching us another lesson. We have seen how social and political changes can attack all these great activities; we have seen the rise of a kind of society in which neither religion nor science or philosophy is possible. The last time I was in this country I had the honor of being a guest of the tercentenary celebrations at Harvard, a meeting of representatives of universities from all over the world. But already there was a cloud rising above the horizon. There were no representatives from any of the great universities of Germany or Russia. The international Commonwealth of Universities was beginning to be denied. What has happened since in Germany, Italy, and Japan has made us realize more clearly the relation between social forces and forms and the health and life of religion and of science.

I propose therefore in these chapters to consider religion and science in the modern world, to note the institutional forms in which took shape the new movements in religion and science which marked the beginnings of our modern world; to consider the part which these forms played in modern society and the influence which in turn the changes in

modern society have had upon them; and finally in the light of all this to say something of the perils and of the hopes which confront us in the present situation. We shall see, I hope, that there is an essential connection between the vitality of religion and science and the vitality and fellowship inspiring churches and universities, and an equally essential connection between these and the vitality of the societies in which they exist.

My mind was turned in this direction by an incident in a recent discussion in which I took part. We were conferring, as so many these days are conferring, about postwar reconstruction. There was one session devoted especially to a diagnosis of the evils which had brought us to the present tragic situation. Most of us had been concerned with the more immediate evils which are only too evident in our modern industrial civilization. Then one speaker got up whose aim was to recall us to what he thought were more profound considerations. He said that before we considered any specific problems of reconstruction, we should ask ourselves a more fundamental question. Were we not at the end of an epoch? Were we not witnessing the end of Cartesian man? Should we not begin our reconstruction by going back seven centuries?

My first reaction was indignation at yet another of those attempts which are so common in these days to persuade us to neglect our obvious duties

and crying faults for considerations so remote that they call for no action on our part. Afterward, however, the challenge involved in the phrase "the end of Cartesian man" and the exhortations that we should go back seven centuries—that is, I suppose, to St. Thomas—set me thinking. Had the turn which Europe took in the sixteenth and seventeenth centuries really been a mistake? Did men then really depart from the main stream of Western civilization? Did Luther and Calvin and Descartes really go over a stile into Bypath Meadow and so land Western civilization in the dungeon of Giant Despair? Or, to continue with Bunyan, was this only Timorous at the top of the Hill Difficulty and, just when Christian is coming to the Palace Beautiful, flying from the lions that are chained?

For let us be quite clear what this challenge really means. It does not just mean that Protestantism was a mistake—though it does mean that; or just that modern science has been such a misfortune that we should give it up—though it does mean that. It means that what is sometimes called Anglo-Saxon civilization is a mistake; that the great American Experiment was a mistake—that, in short, the causes we profess to defend in this war had better not be defended.

This is not to deny that Descartes, first of the great modern philosophers, was in many things profoundly mistaken. I think he was. Nor do I

deny—who could?—that modern Western civilization is in sore straits. We clearly must consider hard where we have failed and what has gone wrong and be ready to give reasons for the faith that is in us. But it is one thing to do that, and to conclude that we have failed because we have not been faithful to the vision given to us in the sixteenth and seventeenth centuries; we have not kept our principles alive to meet the new problems with which our very success has confronted us. It is quite another to say in disillusion and weariness that the whole adventure was wrong.

When St. Peter—in the Gospel story—found himself beginning to sink in the water, he wasn't told that he had been a fool to come out of the boat; that he had better have stayed safe with the other less adventurous disciples. He was told that he hadn't enough faith; that if he had believed enough in what he had already done he would not have sunk.

I believe that our plight is the same: that what Western civilization did in both religion and science in the sixteenth and seventeenth centuries was a supreme act of Christian faith: that to talk of going back behind it is an act not of faith but of despair.

For I am convinced that the beginning of the modern adventure in both science and religion was the revival of the essentially Christian conception of the infinity of God and the consequent realization

that God had given man an infinite task in understanding and doing His will and knowing His world. This meant the giving up of all formulations of the will of God which claimed to be final and all intellectual constructions into which new discoveries had to be fitted. It meant a belief in experiment and diversity. It meant finally—and this was alike the glory and the danger of the adventure—that the unity which was to keep men together in this many-sided experiment could not be a unity of accepted formulae but the unity of a common life of fellowship. We shall see, I hope, how both religion and science, conceived in this spirit, produced institutions fitted to express it. We shall also—alas!—see how that unity of spirit and fellowship has been largely destroyed with disastrous consequences and ask how we can set about to restore it.

The two great movements which we connect with the sixteenth and seventeenth centuries, the Reformation and the beginnings of modern science, were very different. Yet I think they will be found to have one distinctive characteristic in common and that to be one which above all distinguishes Christian from Graeco-Roman civilization. The phrase "Cartesian man" reminded me that Descartes went back to St. Augustine and that St. Augustine perhaps more clearly than anyone else had set out the principles contrasting Christian and Graeco-Roman civilization. Professor Cochrane of Toronto

has written a notable book called *Christianity and Classical Culture*. It begins with Augustus and ends with Augustine.

In that book Professor Cochrane reminds us of a fundamental belief of the ancient classical world that the purpose of the State was to establish and conserve a complete and finished program of life. "The best State," says Aristotle, "is always and everywhere the same." It was the task of the philosophers to formulate that finished ideal. The State was then to put it across and hold it firm, and guard it against every manner of change. The principate of Augustus with which Dr. Cochrane's book begins was hailed as the realization of that ideal and its bankruptcy became more evident as the Roman Empire continued. Greek metaphysics reflected this dominance of the static and the unchanging. It had to recognize the existence of change and motion but never really could find room for them in reality.

The center of Augustine's new philosophy was his defense of the doctrine of the Trinity. That for the first time enabled men to understand what was involved in the affirmation that God is a spirit. For "that which has been there all the time" it substituted pure creation out of nothing—the working of purely creative spirit. It brought together omnipotence and life, eternity and change, infinity and goodness. If creation and activity are the funda-

mental truth of reality, then the teaching of the Hebrew prophets that God is a god of righteousness finds an intellectual framework, and the conception of goodness will itself alter. Moral action will not be the copying or imitation of a changeless pattern—as in a world where changeless patterns are more real than living, changing persons. Morality will be itself creative and growing and developing. If in the classical view the purpose of the State was to formulate, realize, and preserve a changeless code, it will be the task of the State according to the new philosophy to find room for and give scope to development and progress.

Consider, in the light of such a dynamic conception of perfection, the forty-eighth verse of the fifth chapter of St. Matthew's Gospel, "Be ye therefore perfect, even as your Father which is in heaven is perfect," which is the summing up of the teaching of the Sermon on the Mount. In the place of a new code, a revised ten commandments, there is to be a new spirit of active love, to whose achievements there can be no limit; which demands of all men that they should be better than any codes, however high and austere these may be. This means a completely new relation between goodness and social or legal codes. Over and above any social standard of conduct, however exalted, laid down, and maintained by any society, there is a standard

of active perfection, to follow which, as he may, each individual is called. Our conduct is no longer to be limited by the rule of reciprocity which governs social morality. "For if ye love them which love you, what reward have ye? do not even the publicans the same? And if ye salute your brethren only, what do ye more than others? do not even the publicans so?"

It is sometimes said that the moral teaching of the Sermon on the Mount is anarchical. It is not, but it *is* revolutionary and it demands a continual and ever-renewed revolution; which implies this new relation between law and goodness. Aristotle said that while in imperfect States there was a difference between the good man and the good citizen, such difference would disappear in the best State. There virtue and loyalty would coincide. On this assumption we ought all to be seeking to bring such a State into being. Many people nowadays seem to accept this position and ask us to set up a Christian society or a Christian economic system. But the challenge of Christian perfection implies that that is a vain demand. We are indeed called on to bring about a better society, a better State, a better economic system, to bring our institutions nearer to the mind of Christ; but if we think that we can produce a complete Christian model, we have not understood Christian perfection or the meaning of the Sermon on the Mount.

But if the challenge to perfection is to mean that men are to go beyond the accepted moral code in all manner of unpredictable ways, it is, as has been said, a revolutionary element in any society. How then are we to base the State on the moral law, as we must, if morality insists on going beyond law; if morality is to be constantly changing and growing; above all, if the challenge to perfection is to the individual conscience and will therefore affect different individuals differently? I have called this problem elsewhere the conflict of the two moralities, the morality of my station and its duties on the one hand, and the morality of grace and perfection on the other.

St. Paul, in the Epistle to the Philippians, both states the problem and suggests a way out. Notice that he uses the word "perfect" in two senses; those who have accepted the challenge to perfection are called perfect although no one knows better than they that they are not "made perfect." "Not as though I had already attained," he says, "either were already perfect . . . but this one thing I do, forgetting those things which are behind, and reaching forth unto those things which are before, I press toward the mark for the prize of the high calling of God in Christ Jesus. Let us therefore, as many as be perfect, be thus minded: and if in any thing ye be otherwise minded, God shall reveal even this unto you. Nevertheless, whereto we have

already attained, let us walk by the same rule, let us mind the same thing."

This seems to mean, for a Christian society whose members have accepted the challenge to perfection, this: "Let us take the rules we agree about and accept and act on them; only let us remember that we are all called by God to be better than the rules and to go forward in moral progress as God calls us"; that Christians are "called to be saints," i.e., the salt of the earth, the leaven of society, skirmishers in advance. When the example of these moral pioneers has had its effect, the general standard may be pulled up and there may be a new rule. That is indeed how moral progress comes about, even though it sometimes involves that one generation stones its own prophets while it builds the tombs of the last generation's prophets.

This may be what happens, but it can hardly be considered satisfactory to hold that it is all right that society should slay its prophets. Caiaphas surely did not speak the last word on this matter. Can we not get the advantage of the prophets' illumination and insight at less appalling expense?

The medieval world found a provisional solution of this problem in terms of the distinction between natural ethics and the ethics of Christian perfection and the parallel distinction between the secular and the religious life. The law of nature is regarded as a code of morality, binding on every man, discov-

erable by reason without revelation. It was roughly identified with the Roman *jus gentium* and Christian countries could therefore take Roman law for their law. There we have a standard to which positive law must conform, an agreed code of morality on which the State could be based. The Church, of course, in addition formulated a minimum code for Christians which it realized by its teaching and its ecclesiastical sanctions. On the other hand Christian perfection was on the whole to be sought in what is called "the life of religion"—a life lived by the giving up of all ordinary secular ties. Thus each morality—that of my station and its duties and that of grace or perfection—had its own sphere. The morality embodied in and presiding over law was thus preserved from the disturbances of the incalculable inspirations of Grace. The enthusiasms of Grace were canalized in the monastic orders where they had a sphere of their own, removed from, though not out of, all relation to the secular order.

Problems of course there remained—the main one of the relation between Empire and Papacy to begin with—and of course the separation between the secular and the religious life was not and was not meant to be complete. The medieval system was never as tidy as any simple picture would suggest. Nevertheless there was a practical and a theoretical synthesis. There was an acknowledged final moral

authority, which could deal with anything that might turn up. When St. Thomas made an accommodation between Aristotelianism and Christianity he produced an intellectual synthesis corresponding to the practical synthesis of the law of nature and the ethics of perfection. The ideas of order and unity and synthesis are dominant—partly, no doubt, because in practice they were so badly needed. The intellectual construction within which men lived was a closed system, a completed world in which men could feel secure and at home.

This system, already beginning to break down, was destroyed on the ethical and political side by the Reformation and on the intellectual side by the rise of the applied sciences. The Reformation in all its forms attacked the separation of the secular and the religious life. The monks were to come out of their monasteries and the nuns out of their convents—not in order to give up the challenge to perfection but to meet it in the ordinary affairs of secular life. That was the most significant moral of the Protestant doctrine of the priesthood of all believers. The Reformation was a protest against the legalizing of morality which the medieval system had involved and a tremendous assertion of the supremacy of Grace over law. But in so far as it carried with it an assertion of the moral supremacy of the individual conscience, the old basis of political and social order disappeared.

If political obligation is one with moral obligation, and if law is to be obeyed because it is right, what is to be done when the individual's conscience tells him to disobey the law? Unless there is some other ground for political obligation, the necessary uniformity of law is at the mercy of the vagaries of conscience.

For this dilemma three solutions are offered. (1) The Hobbes or Erastian solution which cut the knot by claiming that the State should dominate religion and keep it in its place. It may either tolerate it if it confines itself to a pietism which has no impact on society; or it may demand that men should believe and worship what the State determines they should believe or worship. (2) The opposite extreme is the demand that the saints should rule and use the sword of the civil magistrate to enforce their conception of the good life on the community. This, whether in Geneva or in Scotland or in Massachusetts, proved too intolerable to last. Nor for that matter did it do what it pretended to do. It did not substitute the reign of Grace for the reign of law. "The saints" made the rule at which they had arrived an absolute law and on the whole set their faces against change. The third and really fertile solution was that of the Puritans of the Left and in particular of Roger Williams. It is with this solution that I am particularly concerned.

The Puritans of the Left, explains Professor

Woodhouse in his admirable introduction to the Putney Debates, were full of what he calls the experimental spirit, the belief that there is more to be learned and more to be revealed. "I am verily persuaded," said John Robinson to the departing Pilgrims, "the Lord hath more truth yet to break forth out of his holy word." The Christian, Henry Robinson urged, ought continually to grow, not only from faith to faith, but from knowledge to knowledge. "The true temper and proper employment of a Christian is always to be working like the sea, and purging ignorance out of his understanding and exchanging notions and apprehensions imperfect for more perfect, and forgetting things behind to press forward." "This experimental spirit," concludes Professor Woodhouse, "the eager quest for truth (whether adequately or inadequately conceived) with the attendant confidence in truth's power to guard itself and to prevail if given an open field, is the deepest and most abiding element in the Puritan campaign for liberty of conscience."

We are accustomed nowadays to the conception that science will go on indefinitely making discovery after discovery. So far as I can make out, this notion of progress to infinite perfection appears first in religion. The seventeenth-century scientists, Descartes at least, seem to have thought that knowledge of the natural world was a job which

could be completed in a reasonable time. The modern conception of the endlessness of scientific knowledge is not, I think, earlier than the eighteenth century.

Consider for a moment the political implications of this new conception. It assumes that the most precious things in the life of society will not stay put, that they are bound to grow and develop in a way which cannot be foreseen. They cannot therefore be got within the four corners of any synthesis or formulated order, however comprehensive. There must therefore be a separation between the rules of the State, which have to be uniform and apply to everyone alike, and the churches, which cannot and ought not to be uniform, where there must be liberty of prophesying.

Hence a State founded on toleration, where the State exists to preserve favorable conditions for the alive, growing elements in social life; and hence all the great paradoxes of English and American democracy: that power is only an instrument to make freedom possible, that its strength and rigidity are necessary instruments to encourage the weak and tender things in society, its organization to make possible the things in life which cannot be organized. Hence the distinction between the State and society, between statutory authorities and voluntary organizations. Hence further the assumption that the true democratic experience is that of the

voluntary organization with its belief in discussion and general agreement achieved through discussion and the distrust of the compulsory organization and its force. The democratic State is at best only an analogy of the really democratic religious congregation.

To develop all that this new conception was to mean for English and American democracy would take me too far afield from my proper subject. I want rather to draw your attention to the features of these growing points of this new society—the Puritan congregations.

They were associations whose purpose was something beyond themselves—the glory of God and the doing of His will. All their members were equal in sharing a common experience and a common faith. That was a fact so important that the equality of the society even welcomes diversities and differences among the members of the society. There was one spirit but a diversity of operations. Above all, the society was a fellowship. Its liberty and their equality were within the fellowship. Individualism and liberty and freedom of speculation were prevented from running amok not by an absolute unchanging creed or an absolute personal authority but by the unifying activity of their sharing in a common experience, and by the common faith and a common life. When there are differences, says Cromwell to the agitators in the Putney Debates,

"my rule is let the rest judge." The sense of the meeting, elusive but real, is to be the arbiter. So long as fellowship is real and common faith and experience are real, the delicate business of maintaining unity and diversity, continuity and change, can be maintained, but the whole is a perpetual, ever-renewed adventure of faith.

Now with that ideal in mind let us consider in grim contrast a contemporary picture of man and society by one who was determined to apply the new sciences to the understanding of society, the *Leviathan* of Thomas Hobbes of Malmesbury. Let me hasten to say by way of preface that Thomas Hobbes was not himself a scientist and that I do not think he understood the sciences which he so affected. But his misunderstanding and his methods were adopted and imitated by many after him and their existence and their persistence will be seen to be very important.

Hobbes agrees with the Puritans in finding in man something infinite, a disturbing restless something which will not stay put. It is in vain to set before us the examples of the social animals such as bees and ants. "Amongst these creatures, the Common good differeth not from the Private: and being by nature enclined to their private, they procure thereby the common benefit. But man, whose Joy consisteth in comparing himselfe with other men, can relish nothing but what is eminent." Man, unlike the animals, is endowed or cursed with

reason, which looking unceasingly into causes can see all the dreadful things which could be done to him. ". . . being assured that there be causes of all things that have arrived hitherto, or shall arrive hereafter; it is impossible for a man, who continually endeavoureth to secure himselfe against the evill he feares, and procure the good he desireth, not to be in a perpetuall solicitude of the time to come; So that every man, especially those that are over provident, are in an estate like to that of *Prometheus*. For as *Prometheus*, (which, interpreted, is *The prudent man*,) was bound to the hill *Caucasus*, a place of large prospect, where, an Eagle feeding on his liver, devoured in the day, as much as was repayred in the night; so that man, which looks too far before him, in the care of future time, hath his heart all the day long, gnawed on by feare of death, poverty, or other calamity; and has no repose, nor pause of his anxiety, but in sleep."

Man's reason is a restless imagination. It drives him on perpetually to an infinite task, and the fear which that imagination induces drives him to a restless "desire of power after power." He cannot be safe until he has everything in his hands. Because all men are in like case, war and anarchy are the result.

What is wrong with Hobbes's men is that this restless intellectual imagination is the only thing infinite about them. In all else they remain the

limited selfish animals they started. Their sympathies, their desires, their passions, are as limited as those of other animals. Some demon has enlarged their fears, multiplied without changing their desires, and left them in spirit unchanged. Then a miracle occurs, wrought by the fear of violent death which alone can tame their restlessness, and makes them give up their persons and all their rights—all this endowment which is driving them to war—to bestow them all on Leviathan.

You remember Ivan's story of the Grand Inquisitor in Dostoievski's *Brothers Karamazov*. "We shall persuade them," says the Grand Inquisitor, "that they will only become free when they renounce their freedom to us and submit to us. And shall we be right or shall we be lying? They will be convinced that we are right for they will remember the horrors of slavery and confusion to which this freedom brought them. Freedom, free thought and science, will lead them into such straits and will bring them face to face with such marvels and insoluble mysteries, that some of them, the fierce and rebellious, will destroy themselves. Others, rebellious but weak, will destroy one another, while the rest, weak and unhappy, will crawl fawning to our feet and whine to us, 'Yes, you are right. You alone perceive His mystery, and we come back to you; save us from ourselves.' "

Hobbes's arguments can of course be refuted. If

his account of human nature were true, his Leviathan itself would not be possible. It works only because, besides his selfish, restless, unbelieving entrepreneurs, there is another class of men who do not fear violent death, who can respond to claims of loyalty and devotion, and can therefore make an army which can give Leviathan the necessary power. The course of history and especially of constitutional government contradicted most of Hobbes. Yet, for all that, when we have thoroughly refuted Hobbes's arguments what a disturbing amount of truth there is in the grim picture.

Is not the Leviathan a parable of the impact of modern science upon an unregenerate society? Hobbes's men, as I have suggested, are animals in all but the possession of an over-developed intellect. Any lopsided development of intellect would thus have a Hobbesian result and any society which encouraged the scientific intellect, as Hobbes understands it, at the expense of other qualities would be so far a Hobbesian society. Do we not read Hobbes with different eyes when we have seen Hitler and learnt how modern scientific development and modern technology can produce in reality Hobbes's Leviathan? He would have liked a society where the scientist was encouraged on the understanding that he kept rigidly out of politics.

Between the books which set forth these opposing views there was only the space of seven years.

Roger Williams' *Bloody Tenent* was published in 1644, Hobbes's *Leviathan* in 1651. If Hobbes was right about the new sciences, that they could flourish in the political absolutism of the Leviathan, and could be reckoned on to go on giving power into the hands of government till it could treat men practically, as Hobbes in the name of the new sciences treated them theoretically, as mere atoms at the disposal of the sovereign, then Roger Williams' free, tolerant State had no chance against the scientifically armed Leviathan.

But was Hobbes right about the new sciences and the temper they required for their prosperity? That we have to examine in the next chapter.

II

SCIENCE AND FREEDOM

WE are to consider in this chapter the question raised at the end of the first. Was Hobbes right in his interpretation of the new sciences which first made their appearance in the seventeenth century and have steadily increased their prestige and standing ever since? If he was, then religion was the good fairy and science the wicked giant, and the story is ending with the triumph of the wicked giant. The true story, as we shall see, is more subtle. If it were translated into nursery language, it would be a story of two fairies who had to go their separate ways, but were told that their good fortune in their separate journeys depended on each keeping the other in her heart. For it was fated that if either forgot the other, the one—religion—would become so soft and flabby that she could not move, and the other—science—would then be transformed into the wicked giant of Hobbes's description.

Hobbes was not himself a scientist of distinction, as were, for example, Descartes and Leibniz. Aubrey, his biographer, says that he came "late to mathematics." Aubrey relates a pleasant tale of how Hobbes came into the library of a friend and found Euclid's *Elements* lying open at Book I,

Proposition 47. He read the theorem. " 'By God,' says he, 'this is impossible.' " So he read the demonstration and was astonished, "and this made him in love with geometry." He had, in fact, the fanatical and ignorant devotion which often marks the middle-aged convert to a new faith. He persevered, much over the age of ninety, in a hopeless controversy with Wallis, the distinguished Savilian Professor of Mathematics at Oxford. Hobbes was certain that he had solved the problem of squaring the circle and was angry with Wallis for not being convinced.

As a result of this preoccupation with geometry, he took for granted that physics was through and through geometrical. He was in this respect unlike other English philosophers who stressed the experimental side of the new sciences. He entirely failed to see that physics, though dependent on mathematics, was not just a new branch of pure mathematics. He assumed that the nature of reality must be revealed in mathematics. His own original contribution was to apply the methods and principles of physics, as he misunderstood them, to the study of man and society. He was the first of a long line of thinkers, still unfortunately continuing in our time, who were cajoled by the prestige and success of physics into the belief that the understanding of human nature depends on the application of the principles and assumptions of physics to

the study of society. Karl Marx said, "Thomas Hobbes is the father of us all." But if he was alone among his contemporaries in applying physics to politics, he was not alone in his interpretation of the new science. Most contemporary physicists held the same ideas. They all seem to have held that what they were doing with such success was to apply mathematics to the study of the world of nature—to that world which Plato had called "the world of coming into being and passing away." That was their new achievement. They had broken down the Greek distinction of two worlds, the intellectual world of things "always in themselves remaining the same"—the world of things which "cannot be otherwise than they are"—and the world of things which "come into being and pass away" and "can be otherwise than they are," the sensible world. The first, according to Plato, was the world of knowledge; the second world, because of its very nature, could not be known. It could only be the object of "opinion" or "belief" or seeming. These physicists thought they had broken down that distinction of objects, but they did not therefore conceive that the nature of knowledge or science had altered. Knowledge, according to Plato, was distinguished from opinion or belief, not in being what we should call true, but in being infallible. The propositions of mathematics are seen to be necessary. Each proposition follows necessarily

from its premises. There is no probability about it. There is no need to check the mathematical proposition by an appeal to experience and indeed no possibility of doing so. Belief or opinion is entirely different, uncertain, unstable, "tumbling about," in Plato's words, "between being and not being."

Now the seventeenth-century physicists were introducing revolutionary, paradoxical views. We are now so accustomed to the extraordinary picture of reality with which physics confronts us that we forget how revolutionary and paradoxical these views appeared at first. The senses, according to Descartes, completely delude us about the nature of the natural world. They are not just imperfect accounts of that world. Imperfect knowledge is a contradiction in terms. The senses do not give us knowledge at all. These seventeenth-century physicists could not therefore say, "Here is an account of reality more plausible than that prescribed by the orthodox scientific account." It was not more plausible. It was wildly unplausible. They had to confront sensible plausibilities with intellectual certainty and necessity. Nothing else would do.

Descartes, therefore, the first great philosophical physicist, had to say and did in effect say, "Here, in my physics, alike in my account of the sun and the planets and in my account of the circulation of the blood, is something which cannot be doubted and also which cannot be corrected. It is infallible,

certain, and incorrigible, or nothing." It is infallible because it has been deduced by necessary infallible steps from a first principle which cannot be doubted. Physics must have an infallible indubitable first principle. From that all its propositions must be deduced by infallible steps. The Cartesian "first philosophy," as Descartes called it, is the indispensable foundation of Cartesian physics. It would therefore be nonsense to suppose that others could accept his scientific conclusions who did not accept the primary principle from which they were deduced. Descartes' account of truth follows from these assumptions. Truth is the characteristic of clear and distinct conceptions. When Descartes says distinct, he means it. Each separate proposition of science must be by itself distinctly apprehended and seen to follow inevitably from a previous proposition itself thus clearly and distinctly comprehended. It takes practice and care to know when we are "conceiving clearly and distinctly," and to learn to know the difference between such conceptions and unclear and indistinct apprehensions is the first essential of a scientific training. But when we do know the difference, we have only to be faithful to it to avoid error. Error arises because the will induces us to give answers to questions when we have not got the clear and distinct apprehension required.

We have only to glance at modern science to see

how completely erroneous this account of it is, and how entirely Descartes failed to understand what he as a physicist was doing. For Descartes' science was closely dependent upon and tied up with philosophy. But as the new science progressed, it cut loose from philosophy. For it was in practice found that scientists holding opposed philosophical views could coöperate in scientific discovery. Discoveries in optics were made harmoniously by scientists some of whom held the Cartesian doctrine of the nature of light and some of whom held the Newtonian, and it did not in practice seem to matter. Hence science cut loose from philosophy until gradually the scientist came to regard the philosopher with a kindly and courteous but ineffable pity, and when anyone mentioned metaphysics recalled a story about a blind man looking in a dark room for a black cat that wasn't there. It is important to remember that the new sciences started with just the opposite view, that, unless you began by getting your metaphysical foundation well and truly laid, nothing was any good. This changed attitude, this separating of science from metaphysics, was not due, I am sure, to the sinister influence of any perverse thinkers. It came from something in the nature of the new sciences. The scientist wanted "to get on with the job." He found he could do that better without any first principles

about the nature of reality. These did not help his results and they often got in his way. He wanted his freedom for his own special work.

Secondly, it has become abundantly clear that the modern sciences for all their mathematics cannot do without perception and experiment and do not now want to do without them. Whereas the earlier view was that perception provoked to thought and thought then produced a solution whose proof was that it was intellectually satisfying, the new sciences made perception both the occasion and the test of their thinking. This position is expressed when the scientist says he has no use for a hypothesis which he cannot check or test by experiment. The theories of the logical positivist that no propositions have any meaning except in so far as they can be tested by some perception are only a one-sided exaggeration of this fact about the new sciences. Here again Descartes was entirely mistaken.

Thirdly, the conception of truth changes. When we say that a proposition of modern science is true, we no longer mean that it is clear and distinct or that it is self-evident or that it is intellectually satisfying; we mean that the anticipations of experience implied in it are verified in event. Truth becomes correct prediction, as falsehood is only incorrect prediction. That means that we get scientific truth by the very method which Descartes

denounced as the source of error: by going beyond our evidence to a hypothetical assertion which only the future can confirm or reject.

Finally—and this is the most remarkable reversal of Descartes and all his pioneers—these new sciences do not claim to be certain and infallible and incorrigible. They admit their fallibility. Their truth is provisional. Modern scientists profess themselves ready to scrap the theories they now hold. They are to be allowed to make over again all their doctrines and revise in the light of new facts their previous conclusions. The scientist himself, for all his mathematical apparatus, does not claim what might be called mathematical results. He combines mathematical analysis with experimental humility. Yet, for all this humility, he is clear that science is a very different thing from mere common opinion. He is quite prepared to take a high line with the uninstructed layman. He is, in Blake's words, "Proud to man and humble to God." In spite of his repudiation of certainty and infallibility, the authority he claims and receives is tremendous. Men nowadays say "Modern science teaches us," as they used to say "The Church teaches us." The average layman's attitude to the pronouncements of science is well described in Hilaire Belloc's lines

Oh, let us never, never, doubt
What nobody is sure about!

This is a revolutionary view of knowledge. It is

a complete abandonment of the old disjunction between knowledge and opinion. It is much more an identification of knowledge and faith. It is very closely connected with a conviction of the infinite nature of the task upon which science is engaged, infinite because reality is infinite. The world for science is as intelligible but as incomprehensible as God is proclaimed to be in the Athanasian Creed.

Evident though these features of modern science seem to us, they were not observed for a long time. The English empiricists stressed the aspect of experiment and perception in the new sciences, but they altogether failed to do justice to the mathematical element, and they entirely failed to get over the old distinction of knowledge and opinion. The first man to understand what the new sciences were doing and how they did it was Immanuel Kant.

Kant, in the Preface to the *Critique of Pure Reason*, talks of inquiries which have attained the sure path of a science. He is going to ask how they have done it, and whether metaphysics can follow their example. But the most remarkable thing in these paragraphs is the assumption that the mark of a science is not that it consists of self-evident and infallibly certain propositions. The test of science is, for Kant, agreement in principles and method and continued fertility. (Note, "agreement in principles and method." This implies already that science is a coöperative affair.) The physical sci-

ences are experimental and progressive. They are engaged on a task which can never be completed, which also must be continually revised. Kant insists that the physical sciences essentially involve both a priori principles and experiment, both rules and judgment for which rules cannot be given. What he has to say in this matter comes out most clearly perhaps in what he has to say about causation. All science, he holds, implies the a priori principle of causation. We prescribe that to experience, as he puts it. But it remains true that the application of the principle is empirical, depends on our judgment of the facts, and may go wrong. The principle is only regulative. Kant is equally emphatic on the necessity and on the limitations of the a priori: without a priori principles there can be no science, nothing but an incoherent collection of facts. But the principles must be supplemented by imagination and by judgment. Kant sees that experimental science depends on three things: (1) a priori principles, (2) imaginative hypotheses, and (3) the capacity for judgment or for relating individual cases to general rules. Science is not a deduction from first principles. It is always a combination of general principles and experiment. As the facts are infinite and of infinite diversity of character and rule, knowledge is a never-ceasing quest. It depends on the fertility of the imagination in producing

hypotheses as much as on the grasp of universal a priori principles.

It is instructive to notice in Kant how, as this story proceeds, he comes to give a different meaning to the term reason. When he starts, reason is the faculty of the a priori. It is thought of as a complete unity. Its forms have been completely classified in formal logic. Then later in the *Dialectic*, reason is distinguished from what Kant calls the understanding. The understanding is now much more like what ordinary language means by formal reason. Kant's reason is that which demands the unconditioned. It is the drive in man toward the infinite. Of course our scientific research may sometimes be determined by limited practical ends. We may only want to learn mathematics in order to enable us to navigate successfully but no further. But science proper is driven by the intellectual desire for complete understanding. Reason, therefore, is not just speculative. It is practical and imperative. Then, in the *Second Critique*, reason appears as the source of moral ends and purposes, the creator of values. Reason is a pure creative activity. It is not to be subordinated to any pragmatic or limited ends. Hume had said reason is and ought to be the slave of the passions. What Kant says comes near to asserting that reason ought to be the master passion. Kant proclaims the primacy of the practical

reason. Against the common view, which is curiously prevalent nowadays, that reason is a purely intellectual exercise and that all drives and purposes are merely "emotive" irrational ebullitions, Kant maintains that reason is essentially active and practical.

Even more significant of the way in which science was developing is the fact that Kant finds the regulative principles of reason exhibited in art. In the *Third Critique* he looks for the principles with which science is to render intelligible the infinite detail of nature. Science assumes that reality is intelligible. It must therefore work with principles of general intelligibility. Pure intelligibility, what may be called the rational imagination, is exhibited according to Kant, in art.

The picture which emerges is that of three forms of spiritual or rational activity, conduct, science, and art, each inspired by the idea of an infinite whole, governed in its operation by the idea but never by the apprehension of the whole. You may remember the phrase in George Meredith's "Hymn to Colour":

> His touch is infinite and lends,
> A yonder to all ends.

Reason in its various spheres of conduct, science, and art is engaged in an infinite quest. Its activities are governed by *principles* of unity. But these principles are a working faith, not a final intellectual

construction. The activities of the three spheres are independent. This does not mean that each—conduct, science, and art—is to go its own way, regardless of the others. When that happens, as it sometimes does, the results are fatal. Synthesis is essential, but any synthesis is temporary and continually to be renewed. Let me close this account of Kant by quoting his famous passage at the end of the *Critique of Practical Reason*, reminding you that it was written before he had discovered the nature of artistic activity.

"Two things fill the mind with ever new and increasing admiration and awe, the oftener and the more steadily we reflect on them: *the starry heavens above and the moral law within.*" That is a familiar, even a trite quotation, but mark how it goes on. "I have not to search for them and conjecture them as though they were veiled in darkness or were in the transcendent region beyond my horizon; I see them before me and connect them directly with the consciousness of my existence. The former begins from the place I occupy in the external world of sense, and enlarges my connexion therein to an unbounded extent with worlds upon worlds and systems of systems, and moreover into limitless times of their periodic motion, its beginning and continuance. The second begins from my invisible self, my personality, and exhibits me in a world which has true infinity, but which is traceable only

by the understanding, and with which I discern that I am not in a merely contingent but in a universal and necessary connexion, as I am also thereby with all those visible worlds. The former view of a countless multitude of worlds annihilates, as it were, my importance as an *animal creature*, which after it has been for a short time provided with vital power, one knows not how, must again give back the matter of which it was formed to the planet it inhabits (a mere speck in the universe). The second, on the contrary, infinitely elevates my worth as an *intelligence* by my personality, in which the moral law reveals to me a life independent of animality and even of the whole sensible world—at least so far as may be inferred from the destination assigned to my existence by this law, a destination not restricted to conditions and limits of this life, but reaching into the infinite."[1]

Recall again that passage from the Epistle to the Philippians. "Not as though I had already attained, either were already made perfect . . . but this one thing I do, forgetting those things which are behind, and reaching forth unto those things which are before, I press toward the mark for the prize of the high calling of God in Christ Jesus." Is there not an identity of spirit in these two passages? Is not Kant's account of science the intellectual

1. *Kant's Critique of Practical Reason and Other Works on the Theory of Ethics*, trans. by Thomas Kingsmill Abbott, p. 260.

counterpart of the Puritans' view of faith? Was it not therefore natural that the appropriate organ of the new sciences should be, like the Puritan congregation, a free association, the free university regarded as an organ for the increase of knowledge, a fellowship united by a common faith in the intelligibility of the Universe and a common devotion to the pursuit of scientific truth conceived in the light of that faith?

This transformation of the universities came about first in Germany. As late as 1780 an edict of Frederick the Great enjoined on all the professors at Königsberg with the exception of Kant that their lectures should only be commentaries on a textbook. So rigidly was thinking to be controlled, so limited was to be the role of a university. The universities of the nineteenth century were conceived of in a quite different way. They all claimed *Lehrfreiheit*, the right of untrammeled pursuit of the truth.

It was an old tradition that the universities of Germany should speak as the authentic voice of Germany. Professor Rosenstock Huessy in his *Out of Revolution* explains that Charles V at the Diet of Worms imposed on the German universities the right of saying what should and what should not be published in Germany. They became thus, he says, "the prophetic voice of the German nation," in their faculties of theology especially in the seven-

teenth century, their faculties of law in the eighteenth. The remarkable growth, prestige, and objectivity of the German Civil Service is according to him the result of the fact that the university stood for Germany more than did any one of the small states into which Germany was divided. The counselors of the Prince had the university behind them and therefore a prestige which gave them an independence over the Prince. In the nineteenth century the German universities stood above all for the task of enlarging scientific knowledge. For Germany the university became more an organ of research than of teaching, and it was from Germany that this conception of the role of a university spread to other countries, particularly to America, but gradually all round the world. In the second half of the nineteenth century something very remarkable came into being, a world-wide cooperative commonwealth of universities. No doubt —and this was significant—the *official* relations between universities of different nations hardly went beyond occasions of courtesy, but the cooperative world of scientific research was a very real thing. In a world rent by divisions of nationality, race and color and economic classes, there blossomed in the nineteenth century this strange Utopian flower. Scientists all over the world took for granted that they were engaged in a common task, where they shared their discoveries, acted as

though coöperation in the free pursuit of truth was a task which reduced differences of nationality, color, and class to nought. They were engaged on an infinite forward-looking task. They had, by the first decades of the twentieth century, immense achievements to their credit. They had revolutionized our view of the world of nature and of man. They looked forward confidently to a continued career of new discoveries.

In this wonderful adventure of the human spirit the universities of Germany took and on the whole maintained the lead. Yet in that very country where the freedom of scientific thought had been so triumphant, the German universities made almost no resistance to the forces which attacked that ideal. The churches of Germany, which on the whole the scientific world despised, put up a much stouter fight. The students of Germany seem to have been so little inspired by the faith which had made the universities what they are that they aided the enemy and hastened to devote themselves to other gods. Germany gave up one of her greatest glories with hardly a protest.

Learning dawned, its light arose;
Thus the Truth assailed its foes

sang Mendelssohn at Leipzig in 1840. He would hardly have sung with the same confidence a hundred years later.

There are of course special reasons why the

universities of Germany collapsed so easily—reasons special to Germany. It would be interesting to discuss them. We should have to consider among other things the great difference between Lutheranism and Calvinism and its relevance in this matter. That might make us confident that the universities of England and America would put up a stouter fight. It seems to me, however, less important to discuss the failings of Germany than to ask very seriously whether all is entirely right with ourselves.

I read in May last year two disturbing documents. The first was an account of the state of mind of the young of Germany which explained why they welcomed Hitler. They were described as disillusioned, cynical, indifferent; rooms empty, swept and garnished, ready to welcome the devils who came. With that in mind I read a terrible report of an investigation made by the Carnegie Trust into the state of mind of the young unemployed in South Wales in the summer of 1939. The German conditions were reproduced in dreadful faithfulness. These young men had no faith, no hopes, not even any anger. Only 3 per cent of them had any connection with a political organization, which for South Wales is a portent. They were completely hopeless and completely cynical. We were, it was clear, preparing for another Hitler.

That was alarming enough. But after all the

plight of these young men was understandable and capable of remedy. We had only to remove the scandalous conditions which produced it, to raise the school age, to insist on training in some skill after school age, to stop blind alley occupations and deal with unemployment.

But I was haunted by a much more disturbing thought. Had I not seen traces of the same disillusion and cynicism, of minds as empty of faith and purpose and hope among the students of our universities? I had heard from the United States accounts of the same state of mind among American students. Are our very centers of inspiration failing to inspire? We had built on Roger Williams' pattern a state in which there were to be gardens where all manner of flowers were to be free to grow. What was the use of that if those gardens were to suffer the fate of the garden of Shelley's "Sensitive Plant"?

When winter had gone and spring came back
 The Sensitive Plant was a leafless wreck;
But the mandrakes, and toadstools, and docks, and
 darnels
 Rose like the dead from their ruined charnels.

If the light that is in thee be darkness,
how great is that darkness!

What has gone wrong? Something has gone wrong. We may believe that in England and

America the rot has not gone far, that the situation can be restored. I myself believe that, but honest diagnosis is the first condition of cure. We must face the fact that something has gone wrong; what is it?

I ask you to consider two failures of this modern adventure, one theoretical and the other practical, which have had much to do with what has happened. I propose in the remainder of this chapter to say something about the theoretical failure.

There was an ambiguity in Kant's account of science. He sometimes seemed to imply and was certainly taken to imply that there was one and only one method of science, the method of physics. He had said that freedom could not be known, that only what he called the phenomenal self could be the object of knowledge. There could be no such thing as rational psychology—knowledge of the self deduced from its freedom. There could only be empirical psychology, and if the principles of physics were the principles of all science, the self as known must be regarded not as free but as entirely determined and mechanical. There are suggestions in the *Third Critique* of another view than this, but Kant did not work them out. Nor did he, unfortunately, consider history or ask himself whether his principles and methods of physics could be applied to history.

Of course this failure of Kant's was largely

countered by Hegel, in whose thought history and development occupied a foremost place, but unfortunately Hegel went too far in the other direction and seemed to subordinate the sciences to philosophy. When Hegel's influence began to wane and science reasserted her complete independence and aloofness from philosophy, the assumption that if an inquiry was to be scientific it must follow the methods of physics revived.

Then, in spite of Kant, Hobbes began to come into his own again as the principles and methods of the physical sciences were applied to the study of man and society. The story is a curious one. Kant had put all creativity, spontaneity, reason on the side of the knower. He saw quite rightly that modern science is not a mere passive recording of impressions; that it is an imaginative, original, daring activity. Everyone who considers modern science for a moment must see that this is so. What an adventurous, creative, imaginative activity it is! But the achievements of physics had depended on the assumption that the object of science was quite different, determined, atomistic, uncreative, irrational, stuff for the physicist to master and manipulate and mold to his purposes. As indeed he did. For these new sciences were giving men an unprecedented control over nature. The new sciences were prevailingly mechanistic. They had taken all values out of the object to transfer them to the knower.

Now observe what happens when these principles and methods are applied to man and society. Man in his internal constitution and his social relations must be regarded as if he were only a collocation of atoms and his society only a collocation of atoms. These methods cannot apprehend values and therefore in time we are told that there are no values: they cannot apprehend freedom and we are therefore told that there is no freedom: they cannot apprehend reason and we are therefore told that man is through and through irrational. They cannot apprehend goodness, courage, pity, and love, and therefore these things do not exist and a universal debunking of all that was admired and loved and worshiped is the inevitable consequence. The object has devoured the subject. Frankenstein is killed by his own creation.

But observe that the game depends throughout on one tremendous exception being made to these declarations of the nature of man. They must not be applied to the social investigator himself. If they were, the game would obviously be up. The modern social investigator who believes in this method tells us that men are irrational, the victims of complexes or of economic forces, but in practice by men he means people other than himself. He does not say —at least I have not heard him say—"Modern science has discovered that modern scientists are irrational, the victims of complexes and all the rest

of it." If he did, he would get conviction of sin and there would be hope for him.

Something more subtle and sinister tends to happen. It is difficult to go on denying creativeness and spontaneity and to practice those virtues at the same time. The social scientist therefore tends to abandon the real methods which have made possible the triumphs of the physical scientist, his imaginativeness and daring, and to become a passive recipient of impressions. Most significant of the state of mind of some adherents of this school of thought which I am criticizing is their fondness for the quip about the monkeys and the typewriters. If two monkeys were taught to tap typewriters and if they could go on doing it indefinitely, they would, we are told, in time tap out *Hamlet*. It is a silly quip of course, for it assumes among other things that the monkeys would not acquire regular habits and rhythms of tapping; but it reveals an extraordinary belief in the creativeness of chance. There were published in this country some years ago two massive volumes called *Recent Social Trends*. In one of the articles in these there is a discussion of the future of the relations between religion and science. The writer gives a list of the various possible alternatives, admits that we cannot now say which of these alternatives will prevail, but he adds, "one forecast can be made with some confidence: if science and inductive philosophy go on

developing, men will increasingly discover whether or not spiritual things are real . . ."[2] Given sufficiently large research grants, enough typewriters, card indices, and tabulating machines, the monkey's tapping process may be accelerated and a new Gospel tapped out before disaster overtakes us.

So Hobbes comes into his own again. For if the natural institutional expression of Kant's philosophy of science is the free university, illuminating in ever-widening circles a free society, there is not much doubt about the institutional expression of a conception of science where a few superior persons, endowed with a wisdom confined to themselves, study and by the help of psychological techniques mold to prescribed purposes the irrational, malleable masses whom they investigate and despise. When Aldous Huxley unpacked the bitterness of his heart in his account of this *Brave New World*, there were scientists with us who proclaimed it as the ideal picture of a rationally organized society. Such a society is no longer a dream or a nightmare; if in some degree it was predicted by Hobbes—it was realized by Hitler.

The way out of this mess was pointed out most suggestively by the German philosopher Wilhelm Dilthey. As long ago as the eighties of the last century he published a book called *Einleitung in die Geisteswissenschaften*. There he maintained that men

2. *Recent Social Trends*, I, 414.

had in the past assumed that the method of the social sciences must be either metaphysical or mathematical, and that clearly it was neither one nor the other. He then directed himself to writing a *Critique of Historical Reason*, for he regarded history, rightly to my mind, as the most typical of these studies. The book was never completed, but the drafts of it published after his death show sufficiently the lines of his thought. He makes it the fundamental distinction between the physical and the social sciences that the instrument of the former is what he calls *Anschauen*—a looking, awareness, direct observation—while the instrument of the second is *Erleben*—vital experience, living through.

Professor Collingwood of Oxford has made what is substantially the same point when he says that the aim of the historian is to realize, to re-create imaginatively in himself, the thoughts of men of the past. The inquiries ancillary to history which depend partly on observation, paleography, diplomatics, and so on, are useless except in so far as they are signs to guide this imaginative process. Unless we can imaginatively experience in ourselves what the men of the past experienced, there can be no history. We can learn more of human nature from the poet and the artist than from all the scientific psychology in the world. For the poet has the especial power of arousing in us this re-creating imagination.

By this instrument of Erleben or imaginative sympathy I do not mean intuition or instinct or any kind of vague hunch. Poetry and art are highly creative and rational activities. History, as Dilthey and Professor Collingwood conceive it, is an immense task, requiring as much hard work, patience, objectivity, and creative effort as does the work of the physical scientist, but it is an effort of a different kind.

There is of course nothing fundamentally new in this. Plato in the *Republic* pointed out that bad men can't understand good men, and we all know that to be the case. The precious values of the human spirit have to be lived and realized by ourselves to be understood. What is more often forgotten is that this instrument of Erleben needs to be cultivated and educated as assiduously and carefully as the faculty of scientific observation. If we neglect the cultivation of the re-creative imagination—especially when we live in an industrial civilization which naturally starves it—our hopes of understanding ourselves and our civilization are doomed from the outset.

III

POWER AND FREEDOM

AT the end of the last chapter I noticed that there were disquieting signs that the ideals which the universities of England and America embodied were not the sources of inspiration to the young which they used to be, and that we should face the fact that something had gone wrong. I discussed a theoretical cause of failure—the belief that the methods of the physical sciences could be applied to the study of man and society. I ended with a brief summary of the distinction made by Wilhelm Dilthey between the social sciences whose fundamental instrument was Erleben or living experience and the physical sciences which depended on Anschauen or direct observation.

If this is right, there is a close connection between the theoretical failure and the practical failure which I wish to consider in this chapter. For if insight into man depends upon experience, failures in our experience will affect our insight. The failure in our experience may be of two kinds. It may be failure in the imaginative insight of the individual. It may also be failure in the experience of the common life of our society. The saint, the philosopher, and the poet can, by the greatness of

their imaginative experience, rise above the limitations of their communal experience as the rest of us cannot. But even they need for their inspiration a fellowship of their own. Such special fellowships, as we saw in the first chapter, the Puritan congregations were intended to be. Such special communities again are universities and colleges. But unless such smaller, more favored fellowships are integrated with the larger society of which they are a part, their experience will be a narrow one and it will be difficult for their members to serve society as they ought.

There was a defect in Roger Williams' theory of toleration. His theory was based on separation. The several congregations were to be separate. A sharp distinction was made between the separate congregations and the common work of the State. Because the common work of the State was to be confined to order and defense, Roger Williams was prepared to welcome within his State men whose religious opinions were fundamentally different from his own, even Jews, Turks, and anti-Christians. He does not seem to have observed that if some of these people whom he was prepared to tolerate should become sufficiently numerous and gain the upper hand, they might well destroy the whole system of toleration which had allowed them in unless they all came to share the spirit and democratic faith on which the whole system depended. That demo-

cratic faith was so essential to the whole adventure that it might have to be actively defended by the power of the State. He did not observe this, because he took for granted the general unity of outlook which he shared with all other Puritan sects and was occupied with reconciling the differences between them by giving each room to go its own way. The society he knew was a simple one, in which the functions of the State could be confined in the narrow sphere he ascribed to them and sharply distinguished from the functions of the Church. So pervading was the common social background that the theory never noticed it or fitted it in. There was such abundance of physical room that dissentients could move elsewhere and found a separate Church and social community in one, with the State well away in the distance. The practice of toleration therefore in America was largely conditioned, like so much else in American society, by the existence of the frontier. Abundant physical room brought it about that there was also what we may call abundant sociological room. The slogan of the great American experiment might well have been "Let them all come," applied not only to the millions of human beings of all cultures and traditions who streamed over the Atlantic in the nineteenth century but also to all sorts of religious and social diversities from Brook Farm to twentieth-century Hollywood. For all the incredible differ-

ences of the American society of Roger Williams' day and of the late nineteenth century, for all the profound changes produced by the industrial revolution, the influence of the frontier retained its dominance, and the American way of life remained true to the pattern set by Roger Williams. Americanism, so conceived, was a mental framework welcomed by all manner of men whose inner convictions were little touched by the spiritual faith which had originally produced that framework. The spiritual unity of Roger Williams' society had disappeared, but the framework remained little altered.

English experience, in a tiny island, was perforce different. Toleration in England was achieved as a combined result of two very different factors—the diversity of the Nonconformist sects—themselves, like the American, often intolerant in spirit—and the comprehensive tolerance of the Elizabethan settlement of the Anglican Church. The price which we had to pay was the dominance in England of a hierarchical social tradition. Its consequences were seen most clearly in the effect in our universities. Throughout the eighteenth century and until well on into the nineteenth century the English universities were the preserve of the upper classes and of the Church of England. They were out of all contact with the more radical and democratic elements in English society. The process of making the English universities really reflect the mind of

England, now very far advanced, hardly began before the last quarter of the nineteenth century.

The English and American paths, once widely separate, are beginning to converge. The frontier in America is closed and the spirit of democracy is permeating more and more of English life. In any case, the differences between the American and the English developments of the principle of toleration are neither here nor there in the light of the new danger which threatens them both in the era of technical change brought about by free scientific inquiry. In that era our social conditions have been profoundly altered and a completely new challenge set to the democratic adventure.

Consider only some of the changes in social structure which the industrial revolution has produced. These changes have powerfully affected the natural democratic life of society.

Though there were, of course, differences of wealth in the society of Roger Williams' day, these differences were not incompatible with a common life. All members of these small societies could know one another. But the great inequalities of wealth produced by the industrial revolution have brought with them inequalities of life. In a modern industrialized society the well to do live lives which are out of all connection with the lives of the poor. Class divisions find even geographical expression. There was published in Germany in the twenties of

this century a notable book called *The Mental Pattern of the Marxian Working Man.* In a chapter on "The Uprooting of the Peasant" the authoress, Frau Gertrud Hermes, draws a striking comparison between Berlin as she knew it as a child and Berlin as it was in the early twentieth century. When she was young, she says, there were in the center of Berlin the symbols of civilization—the Cathedral, the Palace, the University, and so on, the houses of the rich and the houses of the poor. Now the center of Berlin is occupied with offices and business houses, the rich have withdrawn to pleasant suburbs where they sleep but do not work, and the poor live in great barrack-like slum districts where the only emblems of civilization are police offices. The German peasant comes from a simple integrated society into a city with class divisions stamped upon it. This is a German example but it is not a specially German phenomenon. What Frau Hermes said of Berlin is to my knowledge true of South Wales, of the Clyde, of the Tyne, and of other industrial districts.

Secondly, there has been a great decrease in local self-sufficiency. Decisions which affect profoundly the lives of countless men and women are taken not in the district where they might make their voices effective but in London or New York or wherever the central executives of railways or chain stores or other great organizations reside.

Thirdly (and this is a development of the last point), man's interdependence has vastly outstripped man's power of common control. Nowadays we are all of us affected by the actions of other men all over the world whom we do not know and whom we cannot control. In the simpler society of our forefathers men's fortunes were affected by the inscrutable behavior of nature which they could not control and by the goodness or badness of individuals whom they knew and could love or hate. They had learned to face the inevitable with resignation. They knew how to act toward the good who helped them and the bad who oppressed.

But now when men are thrown out of employment in one country by what is happening in another they suspect that if these men had been wiser or more considerate their misfortunes need not have happened. But they do not know that. Men have not learned to adapt themselves to this new situation. They alternate between believing the whole thing to be inevitable, accepting it all with fatalistic despair, and finding a scapegoat to hate—the Jews or capitalists or Reds. The sense of frustration which this unfamiliar situation produces, has much to do, in my judgment, with the malaise which is so evident in our industrial civilization.

In so far as we do achieve control over this new situation, the control is only possible by elaborate knowledge and the employment of elaborate scien-

tific techniques. That again destroys the democratic assumption of the earlier society that adequate judgment in public affairs was the common property of all. Expert administration and scientific knowledge become indispensable to government or indeed to any of the great organizations which now control society.

Finally, the Industrial Revolution has brought into society a new form of power, economic power. For the control and management of men has become a powerful instrument of production. Modern industry is oligarchical or monarchical, not democratic. Industrialism has introduced a new division into society, the division between those who manage and organize and take responsibility, and those who are managed and organized and have responsibility taken for them, a division which to my mind is far more important than the division between rich and poor. A modern industrial society, with a democratic government and an oligarchically controlled system of production is then a house divided against itself.

This is the barest sketch of some of the transformations wrought in the simple democratic society of our forefathers by the Industrial Revolution. Although much more might of course be said, I will only add one touch which is needed to keep the balance true. The effect of the Industrial Revolution on society has been largely but not wholly

antidemocratic. Modern technical inventions have enormously increased the area of effective communication and discussion and therefore the area of effective democratic government. That is one gain. The other is more significant. The oligarchic or monarchical government of industry has compelled the managed and organized to create in their own defense what has been appropriately called industrial democracy. That consists, in England at least, not only of the Trade Unions, but of what we call the organized working class movement with its diversified structure of Trade Unions, Coöperative Societies, Workmen's Clubs and the Workers' Educational Association. No doubt the rise of this industrial democracy may at first produce a further division in society between the organized labor movement and those of the professional classes who, having themselves no need for such organizations, do not regard them with understanding or sympathy. But even if that happens, the democratic gain vastly outweighs the loss.

Now let us stop for a moment and compare society before and after the Industrial Revolution, look on this picture and on that and think what the moral of it is for our theme. The great adventure we have been considering starts with a simple society, animated, for all its differences, by a common spirit. The free associations which grew out of it, whether churches or colleges, could be free

without losing sense of direction or aim. They were so immersed in the community, so imbued with its spirit, that it never occurred to them to ask, as men do nowadays, what is our aim? Where are we going? Contrast with that our modern society, huge, heterogeneous, intricate, built over with walls of misunderstanding across which men cannot see one another, through which they hear, not their brothers' words, but only "voices prophesying war." What wonder that they feel

> Here we are as on a darkling plain
> Swept with confused alarms of struggle
> and flight,
> Where ignorant armies clash by night,

want to give up their "uncharted freedom" and be given definite orders and clear directions from almost any source!

Even the churches, which after all have clear orders, whose business it is to aid God's purpose in redeeming the world and to proclaim good news to every creature, have lost their nerve, and we hear Christians talking of the church retiring to the Catacombs and leaving this pagan world to its fate.

Notice that two things have happened. The original simple unity of society has been disintegrated by the effects of industrialism and a disintegrated society lacks the unity of common life which automatically but unconsciously integrated the free associations—the churches and the universities—

with the community. To restore the essential conditions from which this great adventure took its start a double task of integration is necessary. The free associations have to be integrated with a community which has to be integrated in order again to become really a community.

The great adventure *is* at an end unless we can re-create the conditions which first made it possible, can heal the divisions in our industrial society, break down the walls of misunderstanding which divide us, and regain that unity of spirit which makes freedom possible. But there seem to me no insuperable difficulties in the way, once we are clear that it has to be done. It is really encouraging that our misfortunes are largely due to the fact that we have not noticed what was happening to us, that we have lost a sense of community which we once took for granted. If we recognize that that sense has now got to be consciously restored and maintained, does the necessity of that task fundamentally alter the democratic pattern; fundamentally change the relation of free churches and free universities in a democratic State? Not fundamentally, I think. But if we are consciously to set ourselves to make a community more democratic, to produce and actively maintain what we before could simply take for granted, we shall have to use power to make ourselves free, not just to defend an existing freedom, and that implies a new conception of the

relation between power and freedom or at least a rethinking of the relation.

For all the differences between American and English democracy, they share the fundamental view which they took from the Puritans that the State is only an instrument to serve society. The previous values of the community must be free. The role of the State with its organized force is to preserve that freedom, not to destroy it or to dominate society. That is fundamental. That that should be taken to mean, as it was by Roger Williams and his contemporaries in the seventeenth and eighteenth and on into the nineteenth century, that therefore the role of the State is only to maintain order and defend society from violence within and without is not fundamental. That narrow, strictly defined conception is only a historical accident. It reflects the simple society of our forefathers we have considered where social conditions produced a naturally democratic society. That society needed nothing more done for it than to be protected from violence within and without. That need not mean in the altered conditions of modern society that the State should take no part in restoring democratic society when it has been attacked by new subtle forces.

We shall be holding to the essential pattern of American and English democracy if we say that the function of the State is to serve the community and

to help to make it a community by removing the disharmonies and conceptions which hinder the common life.

But we have to deal with a certain paralysis of will which is largely due to men holding onto an antiquated interpretation of freedom. Freedom, it has long been recognized, needs power. But if we think of freedom as merely being let alone, then freedom and power are thought of as opposites, and power as a necessary evil. Roger Williams and his successors had recognized that the State was an instrument of power, had sought to preserve the freedom of the centers of inspiration and growth by using power for a strictly limited purpose and keeping it in its proper place and at a distance. Power came to be thought of as a necessary but ugly thing, not pertaining to the beautiful free life of the churches and the colleges. In time some of their members came to thank God that they were not as other men are, even these soldiers and politicians. No doubt the soldiers and politicians did their moral dirty work for them but it was dirty work, and its existence was one of those disagreeable facts it is better not to see.

However it was, these men certainly did not think about power. Nothing else can explain how slow they were to see that the technical changes which free science had made possible were producing new and alarming forms of power. As these

more and more revolutionized society and it became evident that economic power had far more influence over what was happening than either religion or science, religion and science no longer felt that they were engaged in a common task and began more and more to go their separate ways. In a world which wanted, above all, the scientific mind in the service of the merciful heart, the merciful heart became sentimental and the scientific mind indifferent.

Society had been organized to allow them to be free, but the freedom they had been given was thought of as "freedom from" and not "freedom to," to quote Nietzsche's penetrating distinction. They thought of freedom as being let alone, to go their own way, forgetting that only in God's service is perfect freedom and in His will our peace. As though there were any point in freedom if we do not use it to serve other people, as though any decent man ever wanted to be free except to be able to do his job. Conceiving freedom as being let alone, they gradually came to think their duty to others consisted in letting them alone. Power of any kind they renounced as an ugly thing, as though their highest value was to proclaim an equality of or indifference to all values.

The churches, or at least some of their members, came to think it was more important to keep themselves unspotted from the world than to visit the

widows and fatherless in their affliction. When the two tasks seemed to conflict, they determined at all costs to remain unspotted by the world and let the widows and fatherless go hang.

They seemed to believe, in spite of the dictum of St. Thomas, that it *was* a "part of Christian perfection to endure with equanimity the sufferings inflicted on other people." They forgot that they had been called into "the glorious liberty of the children of God" to "shower Grace on others as God for Christ's sake had showered Grace on them," to be "fellow workers with God" in redeeming the world. Though they went on calling themselves Christians, they were really Buddhists. The "glorious liberty of the children of God" is not the same as a complete political, social, and religious policy of laisser faire.

Of the sciences medicine was more fortunate than the others. For the human needs it served were obvious and insistent. The triumphs of modern medicine are a glorious example of the scientific mind in the service of the merciful heart. I have indeed heard a university professor maintain that the principles of academic integrity implied that a medical faculty should be as willing to teach poisoners as to teach doctors, but he was not a member of that faculty. The other sciences were less fortunate than medicine. They saw their beautiful triumphs of thought turned to commercialized uses

or to the service of death and destruction. Some scientists clung to their Ivory Tower and prided themselves on the fact that their researches were so pure that they were perfectly and entirely useless. Others, coming to believe that their researches will be used either by government or by big business, are inclined to give up their scientific freedom and advocate a state of affairs in which the scientist will have all his researches controlled and directed by government.

Such are the results of a false and negative conception of freedom. So long as we cling to it, we shall be caught inescapably in the dilemma that we have to choose both in thought and in politics between complete laisser faire and totalitarianism.

We must therefore get straight this matter of the true relation between power and freedom. I want, in considering this matter, to take as it were for my text an illuminating passage from the journals of that profound and radical religious thinker, Sören Kierkegaard. It was written nearly a hundred years ago.

"Instead of distinguishing and saying that while God works good he only permits evil, the whole question of God's goodness and omnipotence and its relation to evil can perhaps be explained quite simply in this way. The greatest good which can be done to any being, greater than any end to which it can be created, is to make it free. In order to be

able to do this omnipotence is necessary. That will sound curious, since of all things omnipotence, so at least it would seem, should make things dependent. But if we rightly consider omnipotence, then clearly it must have the quality of so taking itself back in this very manifestation of its all-powerfulness that the results of this act of the omnipotent can be independent. One man cannot make another man quite free, and why?—because the man who has the power is imprisoned within it and consequently always bears a false relation towards him whom he wishes to free. That is why there is a finite self-love in all finite power. Omnipotence alone can take itself back while giving, and this relationship is nothing else but the independence of the recipient. God's omnipotence is therefore his goodness. For goodness means to give absolutely, yet in such a way that by gradually taking oneself back one makes the recipient independent. From finite power comes only dependence, and omnipotence alone can make something independent, can create something out of nothing which endures of itself, because omnipotence is always taking itself back. . . . Omnipotence, which can lay its hand so heavily on the world, can also make its touch so light that the creature receives independence. It is only a miserable and worldly picture of the dialectic of power to say that it becomes greater in proportion as it can compel and make things dependent.

Socrates knew better: the art of using power is to make men free. But between men that can never happen, though it may always be necessary to stress that it is the highest good: only omnipotence can do so in truth."

With this quotation in mind let us look at the Gospels. If you will read through the earliest account of the life of Jesus, St. Mark's Gospel, you cannot help being struck by the space occupied by miracles of healing. Jesus of Nazareth was a teacher and healer. Crowds came to Him both to be healed and to listen to His words. And we see from the story of the man sick of the palsy that Jesus saw no fundamental distinction between the healing of a man's body and of his soul. There is a natural gradation from healing of bodily ailments, through the healing of diseased minds in the casting out of devils, to his dealings with the woman of Samaria and Nicodemus and Zacchaeus. Consider the passages where it is said that Jesus had compassion: for the leper; for the multitude, because they were as sheep without a shepherd, and he began to teach them many things: he saw a great multitude and was moved with compassion toward them and he healed their sick. The blind receive their sight, and the lame walk, the lepers are cleansed, and the deaf hear, the dead are raised up and the poor have the gospel preached to them.

But though Jesus clearly was moved with com-

passion for and used all the power that was in him to help men and women who came to him because something was wrong with their bodies or their minds or their lives, there are differences in these different kinds of healing. Healing of the body is a simple thing compared to healing of the mind, as that is simple compared to healing a man's life or soul. And for this reason: bodily ills are obvious and are felt by those who suffer from them: and bodily health is much the same thing for all people and much the same in the mind of the patient as in the mind of the healer. Blind Bartimaeus wanted to receive his sight. It is therefore a simple thing to use power of knowledge to cure a man's bodily ailments without using that power to make a man dependent. The healer has not to impose on the sufferer his own notion of health—both share a notion beforehand—and the healer can wait till the sufferer comes and asks him as healer to cure him. The power of the healer removes hindrances to the right and proper functioning of the body and is therefore quite simply power to make men free, the giving of more abundant physical life.

But it is not the same with the other forms of healing which Jesus practiced. Those possessed with devils did not come asking to be healed. They were brought by their relations. The poor creatures themselves—the devil in them, as the narrative describes it—usually objected. The cases we hear

of in the Gospel were, I suppose, such clear and obvious cases that they could be regarded almost like the bodily cures. But now that we study closely and carefully diseases of the mind and have a regular science and practitioners of psychiatry, do we not recognize how much more subtle and delicate and dangerous a matter it is? For there is no such simple norm of a healthy mind as of a healthy body. There are practitioners in this field—not the best—who tell us that we are all more or less diseased in mind and ought all to be treated by them so as to be reduced to one or other of the normal types of which their classification approves. The mental healer, if he is to use his power, as he intends, to make men free, has to have a far more delicate knowledge of the mind and all its infinite possibilities and a far greater reverence for the otherness of other people than the ordinary doctor needs consciously to have. Such distinctions are not to be stressed, just because the distinctions between body and mind and soul are not to be stressed: and an ordinary doctor will cure the body all the better if his perceptions and his character give him an insight into what is wrong with the rest of that particular man. And we recognize that of all professions it is perhaps the doctors in which we most desire character to be shown. But if we do not press the distinctions and recognize their qualifications, we can recognize that curing the mind means the as-

sumption of greater power and a more difficult exercise of this greater power, which can be much more easily perverted: can be, as curing the body can hardly be, a means of making the healed dependent on the healer.

To put men and women right in their way of life, so that they can be freed from the dissatisfaction and uselessness which is troubling them, is an even more delicate and difficult exercise of power than the cure of mental disease. If we read the accounts of how Jesus dealt with people who came to him, it is clear that he had no stereotyped message, that he recognized the difference in people and hence the difference of their needs: and that men recognized that they got from him power in themselves and freedom in themselves. His concern that men should be themselves is seen in his saying to his disciples: It is expedient for you that I leave you. Men's experience of the results in them of this power implies that there are ways of behaving, attitudes of mind and heart, which are to the whole man as disease is to the body. They prevent us from doing the things of which we are capable: without this power we go on thwarting ourselves, doing silly, unsatisfactory things that get us no further, being vaguely and impotently discontented. The Grace of our Lord Jesus Christ, St. Paul continually insists, brings men power and peace and joy.

The Gospel story surely confirms that passage

in Kierkegaard. The end of power is to make men free. Men cannot be made free without power. The use by men of power to make others free is a difficult and delicate business, very easily perverted. To use power to make men free in their social life is a task at least as delicate, as subtle and easily perverted as to use power to free men's bodies or minds or souls. But if we are to keep our modern complex industrialized societies democratic in spirit, it is a task which cannot be shirked.

This surely is a conception of the democratic task which eludes the dilemma of laisser faire or totalitarianism. It is as far removed as could be from that common perversion of democracy which denies all quality, all differences in knowledge and skill. It reverts to the great Puritan conception of democratic equality for which there were diversities of gifts and the same spirit.

We can surely see the task of churches and universities in a democracy so conceived. If we remember Kierkegaard's warning how difficult, if imperative, is the use of power to make men free, we shall see that if the democratic State is to serve the community and make it more of a democratic community it will need the help of every bit of inspiration and every bit of illumination which free churches and free universities can give it. This is not to suggest that the ordinary machinery of democratic government can be superseded by a

government of superior persons. The State's power is to serve the freedom of the common man. Only from the ordinary voter can government learn where the shoes are pinching. Only the control of the common man will keep power from being perverted from its task of serving freedom. But unless the churches and the universities play their part in maintaining and increasing the common life of the community, the work of the State will be in vain.

In my first chapter I noted how Roger Williams distinguished the organs of Grace from the organ of Law. That distinction in its essentials remains. The organs of Grace can only work if they are free. If they were to act at the direction of the State they could not do their work. While in our new conditions the functions of Grace and Law are to be thought of as aiding one another in a common task, the functions are not identical. Law, with force behind it, can only provide a framework, maintain the conditions within which Grace can work freely. The production of a real spirit of democratic common life is entirely beyond the power of an omnicompetent State.

If the universities are to play their share in this great task, they will find that it is twofold. To say that they will have to integrate themselves again with the spirit of the community is far too simple a way to put it. The trouble is that the spirit of the

community itself needs to be rescued from disintegration. They will have to get inside all the many centers of community which there are, get the feel of them from inside, see which give greatest promise of breaking down the walls of division and misunderstanding among us, and so re-create and become united with the spirit of the community at the same time. And in the very process of attempting this they will escape from the present dilemma between free but aimless and rigidly controlled inquiry.

It would be presumptuous of me to say how you in the universities of America will recover the spirit of the community and your unity with it which was the birthright of your earliest universities. I know vaguely that you are making all sorts of experiments in that direction and I could name some of them to my own countrymen. But I am sure that when the job is done men will think of it as a revolution as significant as that which happened when St. Francis and his little brothers, instead of retiring to a monastery, walked the roads and villages of Umbria. And if I may end on a personal note, I like to remember two things: that my own college in Oxford, which has had some share in this movement in England, was founded by a Princess of Scotland who was inspired by one of the first Franciscans who came to England; that the influence on Oxford of the Franciscan movement,

which conceived of knowledge as an instrument to serve, produced a blossoming of scholarship and learning which was the glory of medieval Oxford. That for one; and secondly I like to remember how often in my own work in this movement in England I have been sustained by the words of one of your American poets:[1]

To be out of the moiling street
With its swelter and its sin!
Who hath given to me this sweet,
And given my brother dust to eat?
And when will his wage come in?

And I should like to close by quoting the last verse of that poem in which Vaughn Moody's prophetic soul saw the fateful challenge with which we are now actively engaged:

But thou, vast outbound ship of souls,
What harbor town for thee?
What shapes, when thy arriving tolls,
Shall crowd the banks to see?
Shall all the happy shipmates then
Stand singing brotherly?
Or shall a haggard ruthless few
Warp her over and bring her to,
While the many broken souls of men
Fester down in the slaver's pen,
With nothing to say or do?

1. Vaughn Moody, "Gloucester Moors" in *Selected Poems of Vaughn Moody*, edited by Robert Morss Lovett (Boston, Houghton Mifflin Co., 1931).

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